This resource is for ENGRUD students who entered the UW in AUT23 or later.

Mechanical Engineering
Graduation Requirements
University of Washington
https://me.washington.edu

ENGRUD Requirement Sheet – Key:
◆ = Placement Requirements;
★ = Pick one to satisfy placement requirements
Placement: July 1 at the end of first year

E-FiG: ENGR 101 and GEN ST 199 (2cr)

Mathematics (27-28cr)
◆ MATH 124, 125, 126 - Calc w Analytic Geom I-III (15cr)
MATH 207 - Intro to Differential Equations (3cr)
    [pr: MATH 125] OR AMATH 351
MATH 208 - Matrix Algebra with Applications (3cr)
    [pr: MATH 126] OR AMATH 352
MATH 209 - Linear Analysis (3cr)
    [pr: MATH 207 and MATH 208, or MATH 136]
OR MATH 224 - Adv. Multivariable Calculus (3cr)
    [pr: MATH 126]
OR AMATH 353 (3cr)
INDE 315 – Probability & Statistics for Engineers (3cr)
    [pr: MATH 207]
OR STAT 290 (AP Stats) or STAT 390

Sciences (25cr)
◆ CHEM 142 - General Chemistry (5cr)
★ CHEM 152 - General Chemistry (5cr)
    [pr: CHEM 142]
◆ PHYS 121 - Mechanics (5cr)
    [pr: MATH 125 or MATH 134]
★ PHYS 122 - Electromagnetism (5cr)
    [pr: MATH 125 or MATH 134; PHY 121]
★ PHYS 123 - Waves (5cr)
    [pr: MATH 126 or MATH 134; PHYS 122]

Engineering General Education Requirements (29cr)
Written and Oral Communications:
◆ English Composition (5cr)

Areas of Inquiry:
Arts & Humanities – A&H (10cr)
Social Sciences - SSc (10cr)
Additional A&H or SSc (4cr)
Diversity - DIV (5cr) (may overlap with A&H or SSc)

Engineering Fundamentals (31-33cr)
A A 210 - Engineering Statics (4cr)
    [pr: MATH 126; PHYS 121]
★ AMATH 301 - Beginning Scientific Computing (4cr)
    [pr: Either MATH 125, Q SCI 292, or MATH 135]
CEE 220 - Intro to Mechanics of Materials (4cr)
    [pr: AA 210]
E E 215 - Fundamentals of Electrical Engineering (4cr)
    [pr: MATH 136, or MATH 126 and either MATH 207 or AMATH
    351, either of which may be taken concurrently; PHYS 122]

Engineering Fundamentals (31-32cr) Continued
★ M E 123 - Intro to Vis. & Computer-Aided Design (4cr)
    (A&H)
    [pr: MATH 125 or MATH 135]
M E 230 - Kinematics and Dynamics (4cr)
    [pr: A A 210]
★ MSE 170 - Fundamentals of Materials Science (4cr)
    [pr: CHEM 142, CHEM 143, or CHEM 145]

Departmental Core (45cr)
M E 323 - Engineering Thermodynamics (5cr)
M E 331 - Intro to Heat Transfer (4cr)
M E 333 - Intro to Fluid Mechanics (5cr)
M E 354 - Mechanics of Materials Lab (5cr) (W)
M E 355 - Intro to Manufacturing Processes (4cr)
M E 356 - Machine Design Analysis (4cr)
M E 373 - Intro to System Dynamics (5cr)
M E 374 - Systems Dynamic Analysis and Design (5cr)
M E 493 - Introduction to Capstone Design (2cr) (W)
M E 494 - Capstone Design I (3cr)
M E 495 - Capstone Design II (3cr)

Mechanical Engineering Option Courses (19cr)
Complete one option below. See department for list of approved courses.
   a. Standard Option
   b. Mechatronics Option
   c. Biomechanics Option

Free Electives (~2cr)
Additional coursework in any subject area not used elsewhere in degree.

Total credits required for graduation: 180cr

Honors or accelerated sequences of chemistry, math and physics will satisfy the placement requirements.

Updated October 2023
This resource is for ENGRUD students who entered the UW in AUT23 or later.

This is a sample four-year plan for ENGRUD students that prepares them to be able to request placement at the end of the first year. It is intended to provide a framework for ENGRUD students to reference as they create their own individual academic plan.

Courses required to request placement for ENGRUD students: ENGR 101; MATH 124, 125, 126; CHEM 142; PHYS 121; English Composition; ENGRUD students who are interested in ME should choose one of the following: AMATH 301, CHEM 152, ME 123, MSE 170, PHYS 122, PHYS 123.

### First Year

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<tr>
<th>Autumn Quarter</th>
<th>cr</th>
<th>Winter Quarter</th>
<th>cr</th>
<th>Spring Quarter</th>
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<tr>
<td>✷ MATH 124 - Calc w/ Analytic Geom I</td>
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<td>✷ MATH 125 - Calc w/ Analytic Geom II</td>
<td>5</td>
<td>✷ MATH 126 - Calc w/ Analytic Geom III</td>
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<td>✷ CHEM 142 - General Chemistry</td>
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<td>✷ CHEM 152 - General Chemistry</td>
<td>5</td>
<td>✷ PHYS 121 - Mechanics</td>
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<td>✷ E-FIG: ENGR 101 &amp; GEN ST 199</td>
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<td>✷ English Composition</td>
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### Second Year

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<tbody>
<tr>
<td>PHYS 122 - Electromagnetism</td>
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<td>PHYS 123 - Waves</td>
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<td>CEE 220 - Mechanics of Materials</td>
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<td>A A 210 - Engineering Statics</td>
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<td>MATH 208 - Matrix Algebra with Apps</td>
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<td>MATH 209 or Math 224</td>
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<td>M E 123 - Intro to Visualization &amp; CAD</td>
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<td>M E 230 - Kinematics &amp; Dynamics</td>
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<td>MSE 170 - Fundamentals of Material Sci</td>
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<td>MATH 207 - Intro to Differential Equations</td>
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<td>M E 323 - Engineering Thermodynamics</td>
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<td>M E 333 - Intro to Fluid Mechanics</td>
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<td>M E 355 - Intro to Manufacturing Proc.</td>
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<td>E E 215 - Fund of Electrical Engineering</td>
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<td>M E 373 - Intro to System Dynamics</td>
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